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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/932,793	08/17/2001	Chew Kai Hwa	1085-029/ddh	5435

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IPSOLON LLP
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EXAMINER

IP, SIKYIN

ART UNIT	PAPER NUMBER
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1742

DATE MAILED: 09/24/2003

13

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/932,793

Applicant(s)

HWA ET AL.

Examiner

Sikyin Ip

Art Unit

1742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07-22-03;08-21-03.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-6,9-11,14 and 15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4-6,9-11,14 and 15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1, 6, and 11 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over WO 9709455 (abstract, alloys c and f-h), USP 5538686 to Chen et al (col. 1, line 60 to col. 2, line 37), JP 10314980 (abstract), JP 2000141078 (abstract), WO 2000018536 (abstract), or JP 11221694 (abstract).

4. The cited reference(s) disclose(s) the features including the claimed Pb-free Sn based solder. The difference between the reference(s) and the claims are as follows: Cited references' solder alloys do not disclose P element. But, P element content in instant claims 1, 6, and 11 reads on zero which suggests said P element could be

eliminated from the claimed solder alloy. Therefore, the subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have selected the overlapping portion of the subject matter disclosed by the reference. Overlapping ranges have been held to be a prima facie case of obviousness, See MPEP § 2112.01, *In re Best*, 195 USPQ 430, *In re Malagari*, 182 USPQ 549, *In re Titanium Metals Corporation of America v. Banner*, 227 USPQ 773 (Fed. Cir. 1985), *In re Woodruff*, 16 USPQ 2d 1934, and *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976).

5. The phrase “for use in wave soldering” is an intended use which does not lend patentability to the alloy and/or the process. Reciting the contemplated end-use in a product claim directed to an old compound does not impart thereto the novelty requisite to patentability, even though the end-use is unobvious. *In re Thuau* 135 F.2d 344, 57 USPQ 324 (CCPA 1943). Moreover, as is evinced by WO 9709455 that solders of cited references are interchangeable for hand soldering, wave soldering, or paste reflow soldering (see abstract in the “ADVANTAGE” paragraph.)

6. Claims 4, 5, 9, 10, 14, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over references as applied to claims 1, 6, and 11 above, and further in view of JP 2001058286 (abstract).

7. The claimed subject matter as is disclosed and rejected above by the cited

reference(s) except for P element. However, JP 2001058286 in the abstract teaches P content less or equal to 0.2 wt.% could be added as antioxidant element in the same field of endeavor or the analogous metallurgical art. Therefore, it would have been obvious to one having ordinary skill in the art of the cited references at the time the invention was made to provide Sn base solder with P element as taught by JP 2001058286 in order to improve antioxidant. It has been held that combining known ingredient having known functions, to provide a composition having the additive effect of each of the known functions is within realm of performance of ordinary skill artisan. In re Castner, 186 USPQ 213 (217). The use of conventional materials to perform their known functions in a conventional process is obvious. In re Raner, 134 USPQ 343 (CCPA 1962).

Response to Arguments

8. Applicant's arguments and declaration filed July 22, 2003 and August 21, 2003 have been fully considered but they are not persuasive.
9. Applicants' argument as set forth in the items 4-5 and 9 of the instant declaration is noted. But, applicants' argument is found inconsistent with the scope of the claims because essential element should be recited in independent claims. Instant independent claims 1, 6, and 11 have not recited a positive lower limit of P. The instant specification does not support the claimed P content is critical. It has

been held that features which are merely “preferred” are not critical. In re Goffe, 191 USPQ 429 (CCPA 1976). The property or result relied upon must be disclosed in the specification or flow naturally from the teaching of the specification. In re Slocombe, 184 USPQ 740, 743 and In re Davies and Hopkins, 177 USPQ 381 (CCPA 1973). Mere argument or conclusory statements in the specification is not sufficient. In re Geisler (CA FC) 43 USPQ2d 1362 (7/7/1997).

10. The instant Figures 9, 10A, and 10B fail to show the claimed P content is critical because comparison must be done under identical condition except for the novel features of the invention. In re Brown, 173 USPQ 685 and In re Chapman, 148 USPQ 711. The showing of unexpected results must be occurred over the entire claimed range. In re Clemens, 622 F.2d 1029, 206 USPQ 289, 296 (CCPA 1980). The scope of the showing must be commensurate with the scope of the claims. In re Tiffin, 448 F.2d 791, 792 (Fed. Cir. 1971), In re Coleman, 205 USPQ 1172, In re Grasselli, 713 F.2d 731, 743, 218 USPQ 769, 778 (Fed. Cir. 1983), and In re Greenfield, 197 USPQ 227.

11. Applicants argue that the process of JP2001058286 is different from the claimed process. Therefore, there is no reason to use P as antioxidant element. The use of conventional materials to perform their known functions in a conventional process is obvious. In re Raner, 134 USPQ 343 (CCPA 1962). As pointed out by

the court, In re Kerkhoven 205 USPQ 1069, "It is prima facie obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose (here antioxidant), in order to form a third composition which is to be used for the very same purpose." Cites In re Susi 169 USPQ 423, 426 (CCPA 1971); In re Crockett 126 USPQ 186, 188 (CCPA 1986).

12. Applicants' argument as set forth in instant remarks, second paragraph from bottom of page 5 is noted. But, it is found inconsistent with instant claims 1, 6, and

11. The P content in said claims includes zero.

13. Applicants' argument in page 6 of the instant remarks is noted. But, the examiner reiterates the response as set forth in item 11 above.

Conclusion

14. All claims are drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114 and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the application prior to entry under 37 CFR 1.114. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action after the filing of a request for continued examination and the submission under 37 CFR 1.114. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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Examiner Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to S. Ip whose telephone number is (703) 308-2542. The examiner can normally be reached on Monday to Friday from 5:30 A.M. to 2:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Roy V. King, can be reached on (703)-308-1146.

The facsimile phone number for this Art Unit 1742 are (703) 305-3601 (Official Paper only) and (703) 305-7719 (Unofficial Paper only). When filing a FAX in Technology Center 1700, please indicate in the Header (upper right) "Official" for papers that are to be entered into the file, and "Unofficial" for draft documents and other communication with the PTO that are not for entry into the file of the application. This will expedite processing of your papers.



SIKYIN IP
PRIMARY EXAMINER
ART UNIT 1742

S. Ip
September 21, 2003